

LANGSTON LABORATORIES, INC.

Research • Testing • Problem Solving

2005 W. 103rd Terrace (B) • Leawood, KS 66206-2695 • Ph. 913-341-7800

LABORATORY REPORT

CLIENT: Armco, Inc.
7000 Roberts Road
Kansas City, MO 64125
ATTN: Leland Scott

RECEIVED: January 27, 1987 (5:40 pm)
COMPLETED: March 25, 1987
LLI NO.: 87-1349
P. O. NO.: 24142408338

SAMPLE DESCRIPTION: Groundwater Samples Collected from Armco, Inc. Closed Landfill on January 27, 1987 by Mary Erio of Burns & McDonnell (Project # 82-712-4).

SAMPLE IDENTIFICATION

Station # 2


ANALYSIS

RESULTS

Chloride	44 mg/liter
Iron	3.70 mg/liter
Manganese	2.08 mg/liter
Phenols	< 0.001 mg/liter
Sodium	17 mg/liter
Sulfate	5 mg/liter
pH	7.1, 7.0, 7.0, 7.0
Specific Conductance	1,175 µmhos
	1,175 µmhos
	1,125 µmhos
	1,100 µmhos
Total Organic Carbon	43 mg/liter
	40 mg/liter
	38 mg/liter
	36 mg/liter

cc: Dave Brown
Burns & McDonnell

APPROVED:


Alan Kerschen
Vice President

458937



RCRA RECORDS

SAMPLE DESCRIPTION: Groundwater Samples Collected from Armco, Inc. Closed Landfill on January 27, 1987 by Mary Erio of Burns & McDonnell (Project # 82-712-4).

SAMPLE
IDENTIFICATION

ANALYSIS

RESULTS

Station # 2

Total Organic Halogens

87 µg/liter

85 µg/liter

79 µg/liter

76 µg/liter

Cadmium

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

Lead

0.026 mg/liter

0.024 mg/liter

0.022 mg/liter

0.019 mg/liter

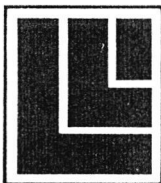
Chromium

0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter



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ANALYSIS

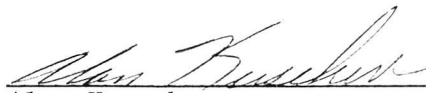
RESULTS

Station # 3

Chloride	59 mg/liter
Iron	3.3 mg/liter
Manganese	0.89 mg/liter
Phenols	< 0.001 mg/liter
Sodium	21 mg/liter
Sulfate	35 mg/liter
pH	6.9, 6.9, 6.9, 6.9
Specific Conductance	1,175 µmhos
	1,175 µmhos
	1,150 µmhos
	1,150 µmhos
Total Organic Carbon	42 mg/liter
	39 mg/liter
	38 mg/liter
	35 mg/liter

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Burns & McDonnell

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Vice President

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SAMPLE
IDENTIFICATION

ANALYSIS

RESULTS

Station # 3

Total Organic Halogens

104 µg/liter

103 µg/liter

98 µg/liter

91 µg/liter

Cadmium

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

Lead

0.029 mg/liter

0.028 mg/liter

0.026 mg/liter

0.020 mg/liter

Chromium

< 0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter



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LABORATORY REPORT

CLIENT: Armco, Inc.
7000 Roberts Road
Kansas City, MO 64125
ATTN: Leland Scott

RECEIVED: January 28, 1987 (11:43 am)
COMPLETED: March 25, 1987

LLI NO.: 87-1353
P. O. NO.: 24142408338

SAMPLE DESCRIPTION: Groundwater Samples Collected from Armco, Inc. Closed Landfill on January 28, 1987 by Mary Erio of Burns & McDonnell (Project # 82-712-4).

SAMPLE IDENTIFICATION

ANALYSIS

RESULTS

Station # 6	Chloride	15 mg/liter
	Iron	6.7 mg/liter
	Manganese	0.73 mg/liter
	Phenols	< 0.001 mg/liter
	Sodium	27 mg/liter
	Sulfate	5 mg/liter
	pH	7.2, 7.2, 7.2, 7.2
	Specific Conductance	960 µmhos
		950 µmhos
		950 µmhos
		900 µmhos
	Total Organic Carbon	46 mg/liter
		45 mg/liter
		42 mg/liter
		41 mg/liter

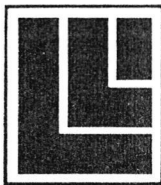
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<u>SAMPLE IDENTIFICATION</u>	<u>ANALYSIS</u>	<u>RESULTS</u>
Station # 6	Total Organic Halogens	85 µg/liter
		80 µg/liter
		79 µg/liter
		79 µg/liter
	Cadmium	< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
	Lead	0.029 mg/liter
		0.027 mg/liter
		0.025 mg/liter
		0.021 mg/liter
	Chromium	< 0.010 mg/liter
		< 0.010 mg/liter
		< 0.010 mg/liter
		< 0.010 mg/liter



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SAMPLE IDENTIFICATION


ANALYSIS

RESULTS

Station # 7	Chloride	71 mg/liter
	Iron	17.9 mg/liter
	Manganese	0.89 mg/liter
	Phenols	< 0.001 mg/liter
	Sodium	50 mg/liter
	Sulfate	5 mg/liter
	pH	6.9, 6.9, 6.9, 6.9
	Specific Conductance	1,600 μ mhos
		1,575 μ mhos
		1,575 μ mhos
		1,550 μ mhos
	Total Organic Carbon	85 mg/liter
		75 mg/liter
		74 mg/liter
		75 mg/liter

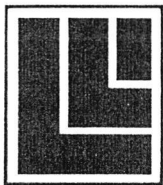
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<u>SAMPLE IDENTIFICATION</u>	<u>ANALYSIS</u>	<u>RESULTS</u>
Station # 7	Total Organic Halogens	90 µg/liter
		77 µg/liter
		77 µg/liter
		75 µg/liter
	Cadmium	< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
	Lead	0.034 mg/liter
		0.033 mg/liter
		0.033 mg/liter
		0.030 mg/liter
	Chromium	0.011 mg/liter
		0.011 mg/liter
		0.010 mg/liter
		0.010 mg/liter



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SAMPLE IDENTIFICATION


ANALYSIS

RESULTS

Station # 9	Chloride	48 mg/liter
	Iron	0.35 mg/liter
	Manganese	1.87 mg/liter
	Phenols	< 0.001 mg/liter
	Sodium	26 mg/liter
	Sulfate	11 mg/liter
	pH	7.1, 7.1, 7.1, 7.1
	Specific Conductance	975 µmhos
		975 µmhos
		950 µmhos
		950 µmhos
	Total Organic Carbon	31 mg/liter
		29 mg/liter
		27 mg/liter
		27 mg/liter

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Burns & McDonnell

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<u>SAMPLE IDENTIFICATION</u>	<u>ANALYSIS</u>	<u>RESULTS</u>
Station # 9	Total Organic Halogens	76 µg/liter
		76 µg/liter
		68 µg/liter
		60 µg/liter
	Cadmium	< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
		< 0.005 mg/liter
	Lead	< 0.01 mg/liter
		< 0.01 mg/liter
		< 0.01 mg/liter
		< 0.01 mg/liter
	Chromium	< 0.010 mg/liter
		< 0.010 mg/liter
		< 0.010 mg/liter
		< 0.010 mg/liter



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SAMPLE IDENTIFICATION

Station # 10

ANALYSIS

Chloride
Iron
Manganese
Phenols
Sodium
Sulfate
pH
Specific Conductance


Total Organic Carbon

RESULTS

9 mg/liter
1.6 mg/liter
0.81 mg/liter
< 0.001 mg/liter
10 mg/liter
3 mg/liter
7.2, 7.2, 7.2, 7.2
450 μ hos
450 μ hos
440 μ hos
410 μ hos
13.3 mg/liter
13.2 mg/liter
12.4 mg/liter
12.3 mg/liter

cc: Dave Brown
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SAMPLE
IDENTIFICATION

ANALYSIS

RESULTS

Station # 10

Total Organic Halogens

100 µg/liter

94 µg/liter

85 µg/liter

79 µg/liter

Cadmium

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

< 0.005 mg/liter

Lead

< 0.01 mg/liter

< 0.01 mg/liter

< 0.01 mg/liter

< 0.01 mg/liter

Chromium

< 0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter

< 0.010 mg/liter